What is claimed is:

1. In a semiconductor device comprising:

a low resistance layer;

a parallel p-n junction layer;

a gate electrode;

a base region of a second conduction type; and

a source region of a first conduction type,

the low resistance layer, the parallel p-n junction layer, the gate electrode, the base region, and the source region being provided between a first principal surface and a second principal surface of a semiconductor substrate,

the parallel p-n junction layer comprising a plurality of first conduction type regions and a plurality of second conduction type regions both extending in the vertical direction from the first principal surface side toward the second principal surface side, and being alternately joined in a lateral direction,

the gate electrode filling each of trenches formed on the first principal surface side with a gate insulator film provided between the gate electrode and the trench,

the base region of the second conduction type being made in contact with at least a part of a section of the gate insulator film along a side wall of the trench, and

the source region of the first conduction type being separated from the first conduction type regions by the base region of the second conduction type and being made in contact with the section along the side wall of the trench,

the improvement wherein

second conduction type regions as a part of a plurality of the second conduction type regions have end portions of the trenches formed therein.

2. The semiconductor element as claimed in claim 1 wherein, about each of the second conduction type regions with the end portions of the trenches formed therein of a plurality of the second conduction type regions, an impurity concentration in a section surrounding the end portion of the trench is higher than an impurity concentration in a section on the second principal surface side.

3. The semiconductor element as claimed in claim 2 wherein the section with a higher impurity concentration surrounding the end portion of the trench in the second conduction type region having the end portion of the trench formed therein is disposed in the second conduction type region in the parallel p-n junction layer disposed in a region allowing a current to flow in a turned-on state.

4. The semiconductor element as claimed in claim 1 wherein, about each of the second conduction type regions with the end portions of the trenches formed therein of a plurality of the second conduction type regions, a width of a section surrounding the end portion of the trench is larger than a width

in a section on the second principal surface side.

5. The semiconductor element as claimed in claim 4 wherein the section with a larger width surrounding the end portion of the trench in the second conduction type region having the end portion of the trench formed therein is disposed in the second conduction type region in the parallel p-n junction layer disposed in a region allowing a current to flow in a turned-on state.